

CLAIMS

1. (Currently Amended) A computer storage media having processor-executable instructions that, when executed by a processor, performs a method comprising:

receiving, by head-end equipment from a content provider, a digital television (DTV) application and its associated metadata, wherein the receiving is facilitated by an extended asset definition interface, the extended asset definition interface specifying a data structure including the DTV application and metadata attributes consisting of:

an application identifier field for identifying the DTV application;

an originator identifier field for identifying an originator of the DTV application;

an application-type field for indicating a type of the DTV application and specifying a runtime environment needed to run the DTV application;

a profile field for indicating a minimum profile of a system on which the DTV application will execute;

a visibility field for indicating the degree of control a user has over the DTV application;

a permission field for denoting "sandbox" security permission of the DTV application; and

a rating field for indicating a rating of the DTV application;

generating, by the head-end equipment, an application information table for conveying application signaling information to a DTV receiving unit, the application

information table being generated based on the associated metadata;

generating, by the head-end equipment, a content referencing identifier for the DTV application;

registering, by the head-end equipment, an authority record with an authority to enable the DTV receiving unit to resolve the content referencing identifier;

generating, by the head-end equipment, a data grouping having the application information table and the content referencing identifier;

sending, by the head-end equipment, a transmission to the DTV receiving unit, wherein such transmission comprises the data grouping, whereby the application signaling information is used by the DTV receiving unit to discover and launch the DTV application,

wherein the head-end equipment, the content provider, and the DTV receiving unit are each separate and distinct from each other, and

wherein the extended asset definition interface is defined to correspond to information that an application signaling generator of the head-end equipment needs to generate the application information table.

2. (Previously Presented) A computer storage media as recited in claim 1, wherein the method further comprises storing, by the head-end equipment, the DTV application and its associated metadata.

3. (Previously Presented) A computer storage media as recited in claim 1, wherein the method further comprises constructing and formatting, by the head-end

equipment, a DTV data service transmission which comprises the DTV application.

4-13. (Canceled)

14. (Currently Amended) A method for managing digital television (DTV) application signaling, the method comprising:

receiving, by head-end equipment from a content provider, a DTV application and its associated metadata, wherein the receiving is facilitated by an extended asset definition interface, the extended asset definition interface specifying a data structure including the DTV application and metadata attributes comprising:

an application identifier field for identifying the DTV application;

an originator identifier field for identifying an originator of the DTV application;

an application-type field for indicating a type of the DTV application and specifying a runtime environment needed to run the DTV application;

a visibility field for indicating the degree of control a user has over the DTV application; and

a rating field for indicating a rating of the DTV application;

wherein the metadata drives data insertion equipment at the head-end equipment;

constructing and formatting, by the head-end equipment, a DTV data service transmission which comprises the DTV application;

generating, by the head-end equipment, an application information table for

conveying application signaling information to a DTV receiving unit, the application information table being generated based on the associated metadata;

generating, by the head-end equipment, a content referencing identifier for the DTV application;

registering, by the head-end equipment, an authority record with an authority to enable the DTV receiving unit to resolve the content referencing identifier;

generating, by the head-end equipment, a data grouping having the application information table and the content referencing identifier; and

application-signaling, by the head-end equipment, the DTV receiving unit via a transmission comprising the data grouping,

wherein the head-end equipment, the content provider, and the DTV receiving unit are each separate and distinct from each other, and

wherein the extended asset definition interface is defined to correspond to information that an application signaling generator of the head-end equipment needs to generate the application information table.

15. (Previously Presented) A method as recited in claim 14, further comprising provisioning transmission bandwidth, by the head-end equipment, to transmit periodically the application signaling information built for the metadata.

16-18. (Canceled)

19. (Previously Presented) A method as recited in claim 14, wherein the

metadata attributes further comprise:

a profile field for indicating a minimum profile of a system on which the DTV application will execute; and

a permission field for denoting "sandbox" security permission of the DTV application.

20. (Currently Amended) A digital television (DTV) application management system comprising:

a receiving means for receiving a digital television (DTV) application and its associated metadata by head-end equipment from a content provider;

a first generating means, implemented in the head-end equipment, for generating an application information table for conveying application signaling information to a DTV receiving unit, the application information table being generated based on the associated metadata;

a second generating means, implemented in the head-end equipment, for generating a content referencing identifier for the DTV application;

a registering means, implemented in the head-end equipment, for registering an authority record with an authority to enable the DTV receiving unit to resolve the content referencing identifier;

a third generating means, implemented in the head-end equipment, for generating a data grouping having the application information table and the content referencing identifier;

a sending means, implemented in the head-end equipment, for sending a

transmission to the DTV receiving unit, wherein such transmission comprises the data grouping,

wherein the head-end equipment, the content provider, and the DTV receiving unit are each separate and distinct from each other, and

wherein the associated metadata is part of an Extended Asset Definition Interface[[,]] that is defined to correspond to information that an application signaling generator of the head-end equipment needs to generate the application information table, and comprises a data structure embodied on a computer storage media, the structure having fields comprising:

an application identifier field for identifying the DTV application;

an originator identifier field for identifying the originator of the DTV application;

an application-type field for indicating a type of the DTV application and specifying a runtime environment needed to run the DTV application;

a visibility field for indicating the degree of control a user has over the DTV application; and

a rating field for indicating a rating of the DTV application.

21. (Canceled)

22. (Currently Amended) A digital television (DTV) application management system implemented in head-end equipment comprising:

an asset receiver configured to receive a digital television (DTV) application and

its associated metadata from a content provider, wherein the receiving is facilitated by an extended asset definition interface, the extended asset definition interface specifying a data structure including the DTV application and metadata attributes comprising:

an application identifier field for identifying the DTV application;

an originator identifier field for identifying an originator of the DTV application;

an application-type field for indicating a type of the DTV application and specifying a runtime environment needed to run the DTV application;

a visibility field for indicating the degree of control a user has over the DTV application; and

a rating field for indicating a rating of the DTV application;

a content referencing identifier (CRID) generator configured to generate a CRID for the DTV application;

a registration authority record generator configured to register an authority record with an authority to enable the DTV receiving unit to resolve the content referencing identifier;

an application signaling generator configured to generate an application information table for conveying application signaling information to a DTV receiving unit, the application information table being generated based on the associated metadata, and to generate a data grouping having the application information table and the CRID;

a transmitter configured to send a transmission to the DTV receiving unit, wherein such transmission comprises the data grouping,

wherein the head-end equipment, the content provider, and the DTV receiving

unit are each separate and distinct from each other, and

wherein the extended asset definition interface is defined to correspond to information that the application signaling generator needs to generate the application information table.

23-25. (Canceled)

26. (Previously Presented) A system as recited in claim 22, wherein the metadata attributes further comprise:

a profile field for indicating a minimum profile of a system on which the DTV application will execute; and

a permission field for denoting "sandbox" security permission of the DTV application.